

7/30/09 8:34 AM
 \ANF\A-Blog\August 6.3

The Uranium Bomb

Among those who worked for the government on nuclear war planning, operations and crisis decision-making—as I did for five years starting in 1958—I had a very unusual introduction to the Bomb. Except for the very few who had worked in the Manhattan Project, my first awareness of the challenges of the nuclear era had occurred some nine months earlier than for the others, and in a crucially different context.

Unlike nearly everyone else who read the headlines on August 6, 1945-- about a single bomb that had destroyed a city-- my first ^{thought} ~~reaction~~ was: "I know exactly what that weapon is." It was the U-235 bomb we had discussed in class and written papers about, the previous fall.

It was in a ninth grade social studies class in the fall of 1944. I was thirteen, a boarding student on full scholarship at Cranbrook, a private school in Bloomfield Hills, Michigan. Our teacher, Bradley Patterson, was discussing a concept that was familiar then in sociology, William F. Ogburn's notion of "cultural lag."

The idea was that the development of technology regularly moved much further and faster in human social-historical evolution than other aspects of culture: our institutions of government, our values, habits, our understanding of society and ourselves. Indeed, the very notion of "progress" referred mainly to technology. What "lagged" behind, what developed more slowly or not at all in social adaptation to new technology was everything that bore on our ability to control and direct technology and the use of technology to dominate other humans.

To illustrate this, Mr. Patterson posed a potential advance in technology that might be realized soon. It was possible now, he told us, to conceive of a bomb made of U-235, an isotope of uranium, which would have an explosive power 1000 times greater than the largest bombs being used in the war that was then going on. German scientists in late 1938 had discovered that uranium could be split by nuclear fission, in a way that would release immense amounts of energy.

^{listeners} Many hearers have been incredulous, at first, when I've told this story. After all, the Manhattan Project striving to produce a U-235 bomb--along with a plutonium bomb--was then top secret, the best-kept secret of the war along with our breaking of Japanese and German codes. The unprecedented secrecy about the very existence of the Project, along with its scale and urgency, was to avoid stimulating greater efforts among German scientists, with whom the Project bomb-makers believed themselves to be in a desperate race. (They were mistaken; the Germans had in reality turned away from a crash effort at almost the same time, in June, 1942, that the Manhattan Project got started.) "How could your teacher possibly have raised this question in 1944?" I'm often asked.